



Challenges and Complications of Long-Term Screen Exposure: An Editorial Letter

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The persistent exposure of children and adolescents to screens is a growing global problem whose complications are gradually involving societies. The prevalence of screen addiction among adolescents varies considerably from country to country, and the results of recent studies are remarkable. Among the countries studied, Brazil has the highest prevalence, with an incredible 70.9% of adolescents spending excessive time on screens¹. In contrast, studies from Switzerland show that while screen use has increased dramatically, rates of problematic screen use have remained stable without a significant increase in Internet Addiction Test scores^{2,3}. In China, the prevalence of Internet addiction among young people is reported to be 6.2%, which is a lower rate than in Brazil⁴. In Northern Cyprus, the prevalence of Internet addiction among young people is 18.1⁵.

Screen addiction is a growing problem in Iran, especially among children and adolescents. Recent studies report significant screen use with alarming rates of internet addiction. A nationwide Iranian survey found that 33.4% of students watch more than two hours of TV a day during school hours, rising to 53% during vacations⁶. A broader study found that 31.66% of children and adolescents spend excessive amounts of time on screens, with socioeconomic factors influencing these rates⁷. A systematic review found a prevalence of internet addiction of 20% in the Iranian population, indicating a moderate but worrying trend⁸. Factors such as family dynamics, parental involvement, and socioeconomic status have a significant impact on screen time behavior⁹. Although screen time can have educational benefits if managed properly, studies suggest that a balanced approach to screen use is needed in Iran.

Screen addiction is increasingly recognized as a factor influencing disruptions to daily routines. Research suggests that excessive screen use disrupts sleep patterns and alters circadian rhythms, leading to various health problems. Prolonged screen use is associated with poor sleep quality, which can desynchronize the body's circadian cycle, leading to sleep disorders¹⁰. Increased screen use correlates with nighttime eating behavior, which further exacerbates the risks of metabolic syndrome and contributes to circadian rhythm disruption¹¹. Circadian rhythm disruption is associated with

psychiatric problems, including substance-use disorders, suggesting a bidirectional relationship in which screen addiction may lead to circadian rhythm disruption¹².

The relationship between screen time and the development of attention deficit hyperactivity disorder (ADHD) in children has attracted considerable attention in recent research. The medical literature indicates that excessive screen use is associated with an increased risk of ADHD symptoms in children. A meta-analysis found that children who spend more than two hours a day on screens have an odds ratio (OR) of 1.51 for developing ADHD compared to children who spend less time on screens¹³. In addition, dysfunctional parenting styles were found to mediate the association between screen use and ADHD symptoms¹⁴.

The relationship between screen addiction and suicide is increasingly supported by research indicating that excessive screen use, particularly among adolescents, is associated with an increased risk of self-harm and suicidal behavior. A systematic review and meta-analysis found that overall screen use is significantly associated with self-harm and suicidal behavior in young people, particularly through social media and problematic screen use¹⁵. A prospective cohort study found that each additional hour of screen time in children aged 9 to 11 years was associated with 1.09 higher odds of suicidal behavior two years later¹⁶. Research on smartphone addiction among Korean adolescents found that those at high risk of smartphone use were 2.49 times more likely to have suicidal thoughts than regular users¹⁷. However, some studies suggest that the relationship between screen use and suicide may not be as strong as hypothesized, with certain analyses indicating minimal effect sizes over time¹⁸. This highlights the complexity of the issue and suggests that while screen addiction may contribute to suicidal ideation, it is not the only factor.

In summary, long-term screen exposure poses significant risks to mental health and requires effective coping strategies. Families should maintain balanced gaming habits and enforce time limits on screen use. Schools can diversify activities to reduce excessive screen time and promote healthier student engagement. Individuals should be encouraged to seek help for their mental well-being and talk openly about their screen use.



Ethical Considerations

Not applicable.

Conflict of Interest

The authors declare that they have no conflicts of interest.

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